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COMMENTS ON DRAFT EIS
CONTAINER SYSTEM FOR MANAGEMENT OF NAVAL FUELS

In my review of the referenced Draft EIS I have found a number of areas that I believe require additional explanation or basis prior to this document becoming an acceptable Final EIS. In particular I have the following comments:

A • The use of a "universal" cask was eliminated because there is no NRC approved version. Yet, the document examines the use of a "multipurpose" cask, for which there is also no NRC approved version. In fact, I believe that DOE has terminated the contract it had with firms proposing to develop such a cask. Therefore there is no basis for the evaluation of the proposed multi-purpose cask.

B • The EIS purports to represent bounding situations, since a definitive packaging and repository acceptance certification is so nebulous, indeed uncertain. Yet, there are a number of very credible scenarios where the Draft fails to examine a bounding case. For instance -

The proposed fissile loading of the burial cask (of any kind examined in the report) is more than an order of magnitude greater than that proposed for commercial spent fuel. If this is not acceptable, then some kind of "treatment" or small quantity packaging will be required. Either compensatory action will significantly increase the environmental impact over any case shown in the draft EIS.

It is now being widely discussed that the repository package for commercial fuel may have to be titanium or another highly corrosion resistant material, rather than the stainless steel of current storage casks. While it is widely known that Naval fuel itself is highly corrosion resistant, it may still require a package quite different than currently envisioned. Again, a future action to repackage into an approved container is a major effort, no potential impact is shown, yet there is no basis for assuming any container envisioned in the Draft, made from stainless steel, with high fissile loading, and containing long lived isotopes, will meet some future repository acceptance criteria.

C • The Court settlement involving DOE, the Navy, and the State of Idaho (10/16/95) expressly states the Naval fuel is to be packaged in "multi-purpose" casks. Therefore why are other container systems being examined, and who is developing this "multi-purpose" cask?

D • The Court settlement also requires Naval Fuels to be among the "early" shipments to the repository. With the high degree of uncertainty regarding casks and repository acceptance, and with DOE-RW focused on commercial fuels, what is the impact of a failure to comply with the Court settlement?

Thank you for consideration of my comments. My basic issue is that the Draft purports
E to examine various methods of achieving a repository acceptance, yet it overlooks, and hence underestimates, the potential environmental impact from being held to the
F same standards for burial as commercial fuel or vitrified high level waste. Therefore I propose that the EIS should include an evaluation of processing/treatment cases necessary to transform the Naval fuel to a repository form similar to commercial fuel or vitrified high level waste. In addition, the EIS should include the potential environmental impact of having to perform these treatments at a later date as a possible adder for each of the cask/canister options currently evaluated.

Yours truly,

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Commenter: Richard L. Geddes, South Carolina

Response to Comment:

A. The statement in Chapter 3, Section 3.7 of the Draft EIS has been revised in the Final EIS to read: "Because the two systems are functionally similar, and because no feasible universal cask design currently exists that would be capable of receiving Nuclear Regulatory Commission certification, the universal cask was not considered further."

As stated in Section 3.7, it is expected that future canister and cask designs which might be developed will have environmental impacts bounded by those of the six alternatives in this EIS. For example, if a vendor designed a universal cask system which meets the requirements of 10 CFR Part 60, 10 CFR Part 71, 10 CFR Part 72, and other waste package disposal requirements, it would be functionally similar to the multi-purpose canister alternative evaluated in this EIS. Likewise, if a dual-purpose canister design meets the 10 CFR Part 60 and waste package disposal requirements, it too would be functionally similar to the multi-purpose canister.

B. The commenter states that the proposed fissile loading for naval spent nuclear fuel is more than an order of magnitude greater than that proposed for commercial spent fuel. This is not correct. Chapter 2, Section 2.3 of the EIS states that “Naval nuclear fuel is highly enriched (93 percent to 97 percent) in the isotope U-235 as compared with civilian reactor fuel (about 4 percent). However, to ensure the design will be capable of withstanding battle shock loads, the naval fuel material is surrounded by large amounts of structural material made of an alloy of zirconium called Zircaloy. Naval spent nuclear fuel assemblies will fit dimensionally into the same container systems designed for civilian spent nuclear fuel. Because of the large amount of Zircaloy structure and the limit on total loaded weight of the container, the amount of fissionable material in a loaded container is similar for naval and civilian fuel in spite of the different enrichments (in each case, about 440 to 660 lb, or 200 to 300 kg, of U-235).”

The scenario described is covered in the facility and transportation analyses for both normal operations and accidents. In Section A.2.4, Loading Operations, the analysis results for the No-Action and Current Technology/Rail Alternatives include the impact of repackaging naval spent nuclear fuel at Idaho National Engineering Laboratory. If this were required for one of the other alternatives, the larger values in Appendix A, Table A.10 would apply. Similarly, under the Unloading Operations discussion, the impact of repackaging naval spent nuclear fuel at a repository surface facility is presented in Table A.12. If this action were required for the two Multi-Purpose Canister Alternatives, the reported annual health effects would be applicable.

For the transportation analyses, sufficient information is provided to allow the reader and decision makers to estimate the impact of transporting more, smaller packages. In Appendix B, Section B.6.1, incident-free risks are presented in Table B.9 for one shipment of one container for each alternative. This section explains that risks for the total number of shipments, presented in Table B.10, are obtained by multiplying the Table B.9 results by the total number of containers. Similarly, in Section B.6.2, accident risks are presented in a similar format. These discussions were expanded in the Final EIS to explain that if the number of shipments would change, revised conservative total risks could easily be calculated by using the same method.

For facility and transportation accidents, the analysis results presented in the EIS are bounding since the larger the container, the more spent nuclear fuel would be inside. Any reduction in container size would result in a smaller source term, and thus, lower consequences and lower risk.

Commenter: Richard L. Geddes, South Carolina

C. This statement is incorrect. Appendix F, Section F.4 of the settlement agreement states: "Department of Energy and the Navy shall employ Multi-Purpose Canisters ("MPCs") or comparable systems (emphasis added) to prepare spent fuel located at Idaho National Engineering Laboratory for shipment and ultimate disposal of such fuel outside Idaho."

The Navy needs to ensure that naval spent nuclear fuel, after examination, is managed in a fashion which facilitates ultimate safe shipment to a permanent geologic repository or centralized interim storage site outside of the state of Idaho; is protective of the Idaho environment while being temporarily stored at the Idaho National Engineering Laboratory; and complies with the court ordered agreement among the State of Idaho, Department of Energy and the Navy. The six container system alternatives evaluated in this EIS meet these objectives. In addition, National Environmental Policy Act regulations require that a reasonable range of alternatives be considered. The criteria used to select the alternatives for this EIS are presented in Chapter 3, Section 3.0.

D. Section D.1.e of the settlement states: "The naval spent nuclear fuel stored at Idaho National Engineering Laboratory on the date of the opening of a permanent repository or interim storage facility shall be among the early shipments of spent fuel to the first permanent repository or interim storage facility." The penalty for failing to meet this requirement is stated in Section D.1.f of the settlement which states: "The sole remedy for the Navy's failure to meet any of the deadlines or requirements set forth in this section shall be suspension of naval spent fuel shipments to Idaho National Engineering Laboratory as set forth in Section K.1." Section K.1.b states: "If the Navy or the Naval Nuclear Propulsion Program fails to satisfy the substantive obligations or requirements it has agreed to in this Agreement or fails to meet deadlines for satisfying such substantive obligations or requirements, shipments of Navy spent fuel to Idaho National Engineering Laboratory shall be suspended unless and until the parties agree or the Court determines that such substantive obligations or requirements have been satisfied." Finally, in addition to these remedies are any other penalties a court may impose under the Federal Rules of Civil Procedure. The Navy plans to comply fully with the agreement.

E. This claim is incorrect. In Chapter 1, Section 1.0 of the EIS, the proposed action is stated as: "The proposed action of this Environmental Impact Statement is to select a container system for the management of naval spent nuclear fuel after it has been examined at the Idaho National Engineering Laboratory. In addition, this EIS includes several actions which are related to the container system choice:

* Manufacturing the container system,
* Handling and transportation associated with the container system,
* Modifications at the Expended Core Facility and the Idaho Chemical Processing Plant to support loading naval spent nuclear fuel into containers for dry storage,
* The location of the dry storage at the Idaho National Engineering Laboratory and
* The storage, handling and transportation of special case waste associated with naval spent nuclear fuel."

Chapter 3, Section 3.0 of the EIS states that "Designs shall meet the technical requirements found in regulations, specifically 10 CFR Part 72, 10 CFR Part 71, or 10 CFR Part 60 for storage, transportation, or disposal, respectively. If necessary, spent nuclear fuel may be reloaded at a repository surface facility (or centralized interim storage site) into disposal containers that comply with 10 CFR Part 60."

The naval spent nuclear fuel will meet the same standards and requirements for disposal as commercial spent nuclear fuel.

Commenter: Richard L. Geddes, South Carolina

F. Naval spent nuclear fuel will be in a solid form, just as commercial fuel, when it is packaged as described in this EIS. No further processing for disposal in the same manner or form as commercial spent fuel will be needed.

The analytical results for loading operations, dry storage, and unloading operations are presented in Appendix A, Section A.2.4 of the EIS. There are no additional processing or treatment operations required for naval spent nuclear fuel. As stated in Chapter 3, Section 3.0 of the EIS, "Designs shall meet the technical requirements found in regulations, specifically 10 CFR Part 72, 10 CFR Part 71, or 10 CFR Part 60 for storage, transportation, or disposal, respectively. If necessary, spent nuclear fuel may be re-loaded at a repository surface (or centralized interim storage site) into disposal containers that comply with 10 CFR Part 60."